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- Equilume Light Mask can save breeders €1,000 per mare per season

Equilume, a new Irish equine technology company, has announced its official launch. Equilume, a University College Dublin (UCD) spin-out company supported by Enterprise Ireland, is set to become a world leader in light therapy solutions to assist global Thoroughbred breeders to maximise the reproductive efficiency and performance in their horses.

The company has developed and is selling the Equilume Light Mask, a novel automated mobile lighting device which fits comfortably under a horse's head collar. The Mask has been scientifically proven to provide the optimum level of blue light to a single eye of a mare to successfully advance her breeding season.

The universal birthday for a Thoroughbred foal (born in the northern hemisphere) is January 1st in the year in which a foal is born which contrasts with the natural foaling season of the horse which is from May to October.

This crucial, industry wide, date creates a demand for Thoroughbred breeders to advance the onset of their mares' breeding season to produce early foals, to ensure mature yearlings for sales and precocious two-year olds for racing.

Horses are naturally 'long-day' seasonal breeders and daylight is a primary regulator of reproduction in horses. As days start to get longer in Spring, the inhibitory action of the hormone melatonin on a mare's reproduction activity is reduced and mares come into season.

Thoroughbred breeders have known about the importance of light on a mare's reproduction cycle for decades. In order to fool a mare's reproductive system into activating earlier than in nature, many breeders currently maintain, at a significant cost, their non-pregnant mares

indoors, under artificial lighting for 8 to 10 weeks prior to the official start of the breeding season in February.

However by using the Equilume Light Mask Thoroughbred breeders can now still meet crucial industry timelines and at the same time eliminate the requirement to maintain their non-pregnant mares indoors under artificial lighting and save at least €1,000 per mare per season.

The Equilume Light Mask has been developed as a result of ground breaking research carried out by company founder, Dr Barbara Murphy, UCD School of Agriculture and Food Science in collaboration with Professor John Sheridan, an optoelectronics researcher in UCD's School of Electrical, Electronic and Communications Engineering.

Speaking at the official launch of Equilume, Dr Barbara Murphy said, "Our research at University College Dublin found that very low intensities of blue light are required to inhibit circulating concentrations of melatonin in the horse and that it is sufficient to deliver blue light to a single eye of a mare and still inhibit melatonin levels to daylight levels."

"We developed the Equilume Light Mask to provide a safe and cost-effective method of administering an automated, low-level light to a single eye of a mare and it has been designed and tested to deliver sufficient light stimulus to inhibit melatonin production in the mare and thus advance the mare's reproductively active season."

She added, "An important advantage of the Equilume Light Mask is that it also allows horses be horses, and live outdoors in their natural environment where they are happier and healthier."

It is currently not standard industry practice to maintain pregnant mares indoors under artificial lighting prior to foaling. The consequences of the lack of sufficient natural or artificial light for early foaling mares during late pregnancy are longer gestation periods, lower foal birth weights and post-foaling reproductive problems.

The Equilume Light Mask can also be used to provide pregnant mares with the light stimulus

required to ensure timely gestation, increased foal birth weights and reductions in post-foaling cyclicity problems which are associated with early foaling dates outside of the natural breeding season.

Speaking at the launch, Dermot Cantillon, one of Ireland's leading commercial Thoroughbred breeders, and owner/manager of three stud farms in Ireland and in the USA, said, "I have been excited since being introduced to this concept and having successfully used the Equilume Light Masks for the last two breeding seasons, I am confident that it will be a worldwide success for breeders."

W.R. (Twink) Allen, Director, Paul Mellon Laboratory of Reproduction, Newmarket, UK, speaking about the new mask said, "At last, a novel and exciting advance in horse breeding which is based on sound theory and solid science. The Equilume Light Mask is sure to be of major practical benefit to the Thoroughbred breeders around the world who have the good sense to use it."

UCD's technology transfer team at NovaUCD facilitated the identification and protection of the intellectual property arising from Dr Murphy's research which resulted in the development of the Equilume Light Mask. Dr Murphy was also a participant, and an award winner, on the NovaUCD 2011 Campus Company Development Programme. This Programme assists UCD academic and research entrepreneurs in bringing their innovative ideas from intellectual concepts to fully developed and sound commercial businesses.

Brendan Cremen, UCD Director of Enterprise and Commercialisation said, "Equilume, is a prime example of a UCD spin-out company established to translate an innovative idea arising from world-class research carried out in the University into a commercial entity with global potential."

Equilume currently employs 4 people and plans to increase staff numbers to 10 by the end of 2016.

The Equilume Light Mask is entirely manufactured in Ireland.

Equilume, New Irish Equine Technology Company, Set to Light Up the Global Equine Industry

Written by Australian Business

Equilume has already won a number of other awards including Enterprise Ireland's 'One to Watch' Award (2012) and overall winner Newbridge 200 Business Start-Up Competition (2012).

Equilume made the official announcement of its launch at an event held at Killashee House Hotel, Co. Kildare attended by leading Thoroughbred breeders and veterinarians in Ireland.

<http://www.ucd.ie/innovation/newsevents/news/2013/september/equilumesettolightuptheglobal-equineindustry/>

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